

## MODIS Primary Productivity - MOD 27

At-Launch Version = Annual, Empirical  
Total Carbon (global), New Nitrogen & Export (regional)  
Uncertainty Estimates

Post-Launch = "Research" shorter time scale, analytic.  
SeaWiFS Science Team Investigations.  
Primary Productivity Working Group (next vugraph).  
SeaWiFS launch delay has impacted transition.

Annual Algorithm:

Algorithm Theoretical Basis Document on EOS PSO home page.  
Work continuing on :  
publishing.  
assessing uncertainties.  
objective determination of regions of applicability.

Title            PRIMARY PRODUCTIVITY WORKING GROUP

Investigator(s)    WAYNE. ESAIAS  
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                      JANET CAMPBELL

Science Question    COORDINATE THE DEVELOPMENT OF A  
                          CONSENSUS APPROACH FOR SHORT TIME SCALE  
                          PRODUCTIVITY ALGORITHM

Approach:    WORKSHOP SERIES  
                  Third scheduled for June 11-13, 1996

                  ROUND-ROBIN MODEL COMPARISONS  
                  Second round to begin 1 May

                  DEVELOP COMMON SET OF IN-SITU OBSERVATIONS

                  COLLATE COMMON ANCILLARY DATA (Eo, Zm, T, etc)

                  IMPLEMENT TWO YEARS FOLLOWING SEAWIFS LAUNCH

Significant Finding(s)

Three basic modeling approaches are being explored within the community - empirical, semi-analytic based on photosynthetic parameters and chlorophyll, and absorbance based models.

Significant differences (x2) exist between models within regions, and between regions for a given model.

Investigators seem eager to develop good criteria and procedures to model and algorithm comparison.

Reference (Publications)

Draft Workshop report is available.

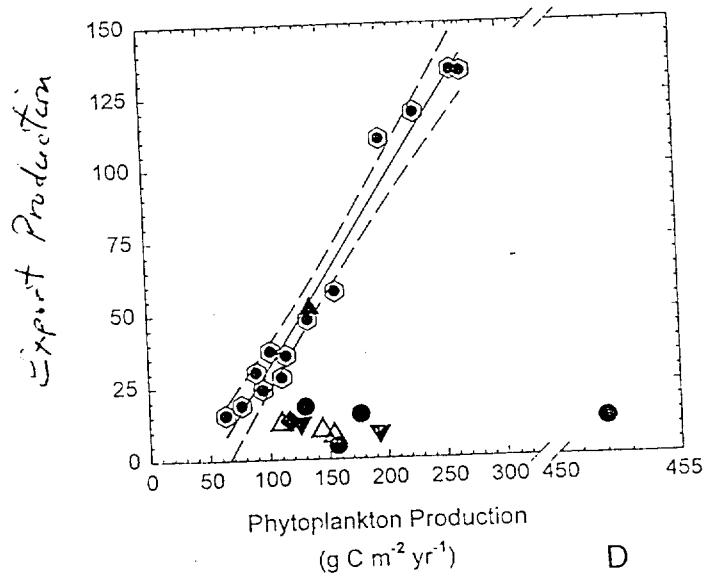
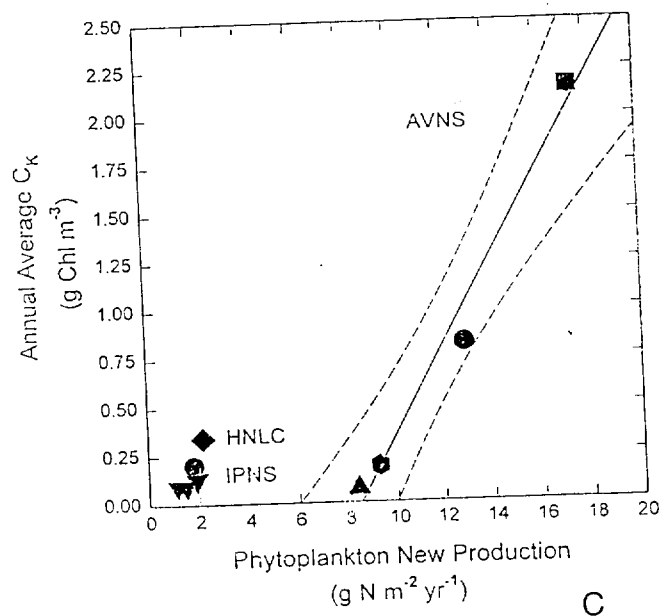
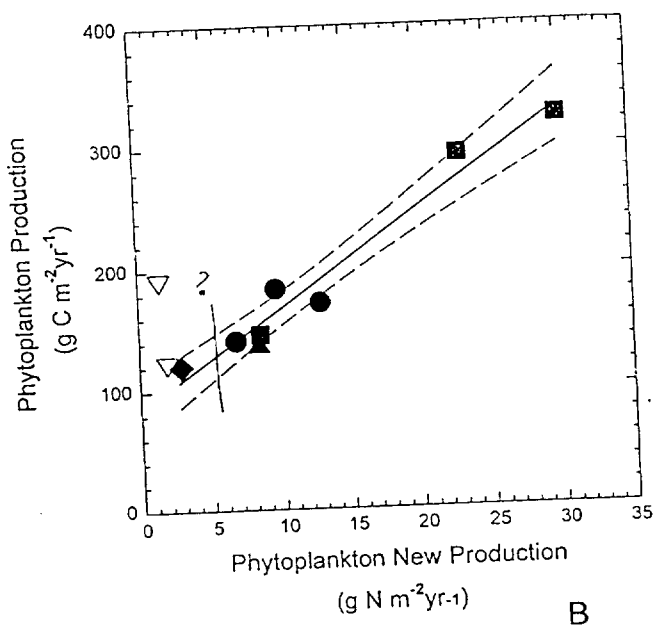
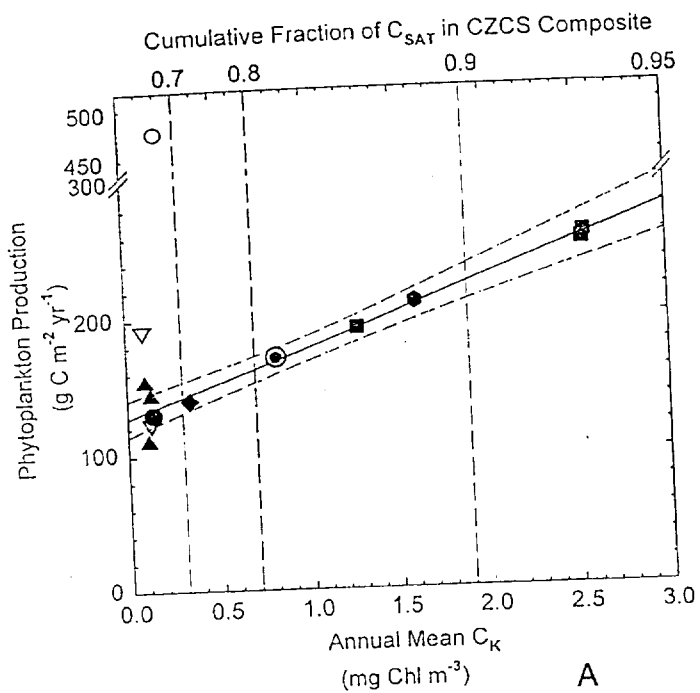


Figure 4

## NASA Ocean Productivity Working Group (PPWG)

Joint SeaWiFS Science Team, MODIS, NASA R&A

Goal: To develop a “consensus” operational primary productivity algorithm and implement within 2 years from SeaWiFS launch.

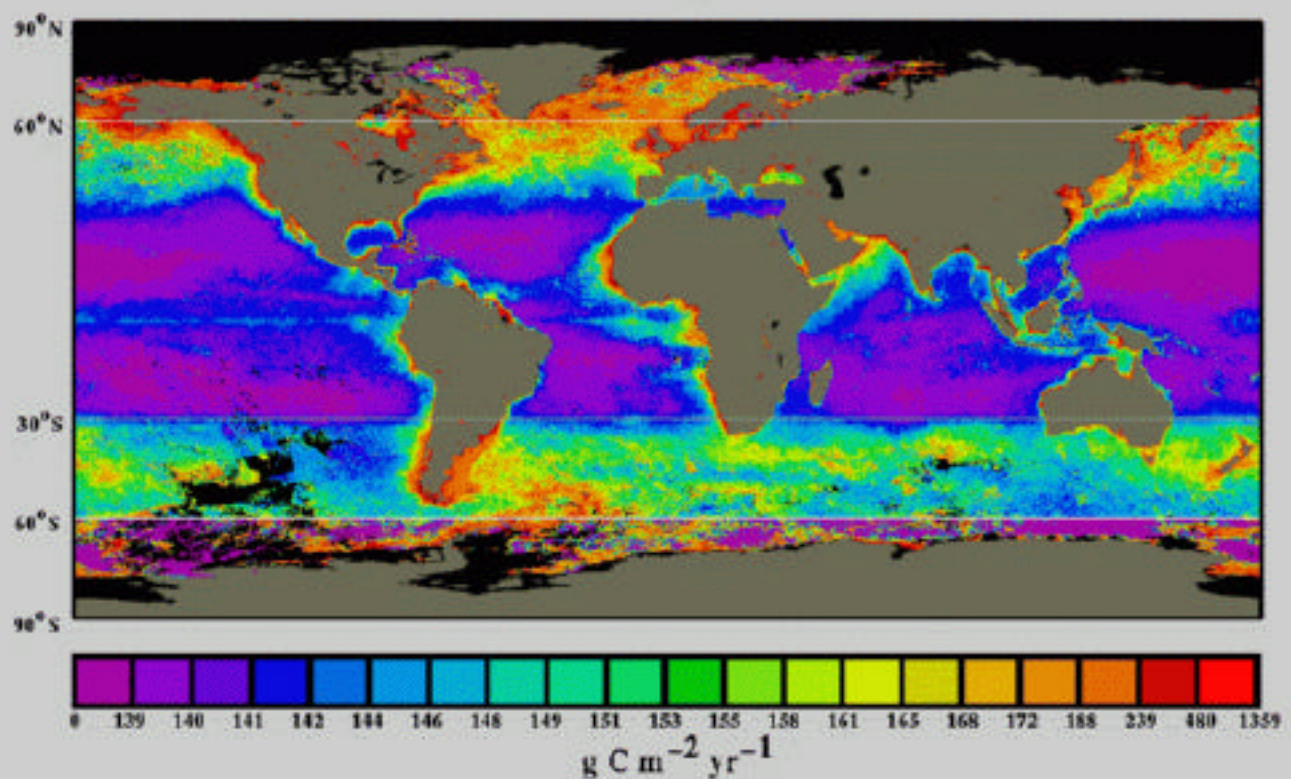
Approach:

- 1) Model intercomparison via a series of open round robin exercises.
- 2) Iterative analysis of model performance and sensitivity.
- 3) Establish open test-bed data base.
- 4) Development of standardized protocols for at-sea validation.
- 5) Iterate parameterization of selected algorithms based on analysis of spatial coherence error fields.

## Status

1. Completed first round robin.
2. Candidate protocols established by JGOFS primary productivity working group. Japanese rep: Mac Takahashi.
3. Established "ad hoc" task groups to implement next round robin exercise.
4. Open test-bed data base set available via anonymous ftp.  
Email [mjb@bnlocn.das.bnl.gov](mailto:mjb@bnlocn.das.bnl.gov)
5. Workshop report available NASA Prod. Home Page
6. Next meeting - GSFC area, June ~~3-4~~ 11-13
  - Objective - draft 5 year Prod. Science plan

## Annual Average Phytoplankton Production



Coastal Zone Color Scanner

November 1978 thru October 1981